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ABSTRACT

A set of 65 evaluation questions was compiled from published instruments. A total of 200 undergraduate students rated both their best and worst teacher from the previous term. Each of the set of 65 items was rated twice for the best teacher and twice for the worst teacher, with order randomized. Factor analysis of ratings of the Best Teachers, the Worst Teachers, and the combined data resulted in similar factor structures. Seven evaluation factors were identified: Breadth of Coverage, Organization/Clarity, Interest/Dynamic, Difficulty, Learning/Value, Individual Contact and Interaction/Discussion. Reliability of individual items was determined by correlating student responses to the same item for the same instructor. Coefficients for the combined data varied between .61 and .97 with a median of .88. There were highly significant differences between mean ratings of Best Teachers and Worst Teachers on all items except those related to Difficulty. The clearest differentiation was for items from the Learning/Value and Interest/Dynamic factors. Students were also asked to select the items which were "most important" in describing the course or instructor. Items from the Interest/Dynamic and Learning/Value factors were selected most often. In general there was a strong correspondence between an item's ability to discriminate between Best and Worst Teachers and its selection as being most important. Based upon criteria discussed, a student evaluation instrument is recommended and its development is described. The rating scale is enclosed. (Author/EVH)

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STUDENTS' EVALUATIONS OF INSTRUCTIONAL EFFECTIVENESS: RESEARCH AND A SURVEY INSTRUMENT [1]

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May 1974

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RESEARCH AND A SURVEY INSTRUMENT

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A set of 65 evaluation questions was compiled from published instruments. A total of 200 undergraduate students rated both their best and worst teacher from the previous term. Each of the set of 65 items was rated twice for the best teacher and twice for the worst teacher, with order randomized. Factor analysis of ratings of the Best Teachers, the Worst Teachers, and the combined data resulted in similar factor structures. Seven evaluation factors were identified: Breadth of Coverage, Organization/Clarity, Interest/Dynamic, Difficulty, Learning/Value, Individual Contact and Interaction/Discussion. Reliability of individual items was determined by correlating student responses to the same item for the same instructor. Coefficients for the combined data varied between .61 and .97 with a median of .88. There were highly significant differences between mean ratings of Best Teachers and Worst Teachers on all items except those related to Difficulty. The clearest differentiation was for items from the Learning/Value and Interest/Dynamic factors. Students were also asked to select the items which were "most important" in describing the course or instructor. Items from the Interest/Dynamic and Learning/Value factors were selected most often. In general there was a strong correspondence between an item's ability to discriminate between Best and Worst Teachers and its selection as being most important. Based upon criteria discussed, a student evaluation instrument is recommended.

INTRODUCTION

The objective of this paper is to describe the development of an instructional evaluation instrument that has been designed to define, describe, and measure effective teaching. The procedures, methods, and statistical approaches used during the study and the development of the instrument will be explained.

To find the most meaningful set of evaluation items, an extensive list of questions was obtained by selecting questions from many used and tested instruments, administering questionaires containing these items to students and then performing data analysis on their responses.

Since there is no single criterion that can be solely used in the development of an evaluation instrument, this study has blended and applied four criteria. Unfortunately, the use of four approaches will not lead to a completely harmonious and congruous conclusion, thus the final instrument can only reflect some compromise of these approaches. Factor analysis has been the primary statistical approach employed, but this technique has been supplemented with the reliability and discriminating characteristics of each question. In addition students responses as to which questions were the most important in evaluating were also used.

METHODS

The final list of questions that had been selected from various other instruments resulted in a collection of 65 items. Using questionaires in which these 65 items were duplicated and then randomized, students were asked to evaluate their best and worst instructors of the previous quarter. Thus each student evaluated his best instructor by using a questionaire in which the original 65 items had been asked twice to measure reliability and then randomized. The same student also evaluated his worst instructor using the same 65 items that had also been duplicated and put into a different randomization. The order of the best instructor evaluation and the worst instructor evaluation and the order of the two randomizations were independently changed so that four distinct questionaires or forms resulted. Appendix I presents one of these questionaires. Students were also asked to indicate which five questions they felt were most important in evaluating their best and also their worst instructor. Students were assured that strict confidentiality would be maintained.

Data analysis was performed on the combined data as well as the best instructor data and the worst instructor data. Factor analysis was done on each on the three blocks of data using both orthogonal and oblique rotations. Comparisons of the three solutions were made to find consistent underlying dimensions.

Reliabilities were also computed on the best instructor data, worst instructor data, and the combined data. T-tests were also used between the best instructor and worst instructor data to measure the discriminating capabilities of each item. All processing was done using the Statistical Package for Social Sciences. (Nie, Bent, Hull, 1970)

The questionaires were administered to students at UCLA in lower division introductory psychology courses during the winter and spring quarters of 1973. The respondents were quite evenly divided between the sexes, 51% males and 49% females, grade point averages were quite diverse, and fields of study varied widely. Most of the participants were freshmen who had completed one to two quarters and who were evaluating persons who had taught introductory or lower division courses. Most of the classes were large and lecture formatted.

CRITERIA FOR THE DEVELOPMENT OF AN INSTRUMENT

An overall goal to be considered in the development of any evaluation instrument is that it be streamlined and concise so as to minimize the administration time. A format for the instrument should be designed such that uniformity and completeness are incorporated. This is a criterion that must be implemented whenever a time constraint is present, as is usually the case.

FACTOR ANALYSIS

Another crucial criterion for the development of a workable instrument is that of factor analysis. The use of factor analysis allows one to define various scales, dimensions, or factors of effective teaching.

Stated simply, factor analysis is a method of identifying and describing the underlying dimensions which are being measured by a set of questions. Using data-reduction capabilities, the factor-analytic technique enables one to see if different patterns of relationships exist so that the data may be rearranged or reduced to a smaller set of factors. The technique selects and groups clusters of items that are highly related to each other and less related to other clusters of items. By characterizing and examining the items that load highest on the factor, one can "name" the dimension or component. This describes the exploratory

level of the technique which is used to identify the dimensions and which was primarily used in this study.

By using questions of the various factors on the evaluation instrument the interpreter is able to examine the distinct components that go into effective teaching rather than isolated questions. It is too often true that individual questions or items may or may not measure the underlying properties they were seeking to examine. A most serious and documented problem in instrument development has been the "hallo" effect in which a general subjective feeling toward an instructor effects the rating on all items. It has been noted that global or non-specific items on questionaires often hinder objectivity and represent a personal bias. (Sockloff, 1973) Although it may be important to measure this subjective component, it is imperative that other scales of measurement are not contaminated by it. Thus a questionaire that measures many dimensions of teaching and that is able to distinguish them can be formulated by the use of factor analysis. An instrument designed using the factor analysis approach will minimize the danger of the "hallo" effect. For these reasons factor analysis is a primary and necessary approach in the formulation of an evaluation instrument.

Preliminary work with factor analysis revealed that seven components existed consistently as they described the ratings of instructors in terms of the best, worst, and combined data.

This work consisted of using orthogonal and oblique rotations with both unconstrained and fixed numbers of factors. More detailed work has been done with the oblique solutions fixed at seven factors. Oblique solutions are appropriate when hypothesized dimensions are related to each other, as they definitely are for instructional evaluations. However, one should attempt to find measures which are independent as possible, for if the factors are highly correlated, interpretation becomes more difficult and the possibility of the hallo effect rises.

Table I indicates which items loaded on each factor. The ranking of the items for each factor is determined by a composite examination of the best instructor, worst instructor, and combined data.

The three factor (pattern) matrices are illustrated in Tables II, III, and IV. Inspection of these tables show that the same seven factors are reasonably consistent across all three analyses (best, worst, and combined). It should be noted that most items load high on only one factor, making the interpretation of the factor solution straight forward. These factors are briefly described below:

Factor I -- BREADTH OF COVERAGE

The variables loading on this factor all dealt with the diversity and broadness of coverage. Three items, contrasted

implications of various theories, discussed other points of view, and discussed recent developments in the field, loaded most consistently. Although this factor is more appropriate for some courses than others, it captures an important component of teaching quality. This dimension describes the willingness of the instructor to extend coverage to alternative approaches to the subject.

Factor II -- ORGANIZATION/CLARITY

This factor was defined by items that dealt with how easy the lectures are to outline, how adequately course objectives were to outline, and how adequately time was distributed over course topics. The clarity of the instructor's explanations and the class assignments is also measured by this factor. This dimension measures student perception of the organization and clarity of the course, course materials, and class presentations.

Factor III -- INTEREST/DYNAMIC

Items concerned with the instructor's enjoyment of teaching, enthusiasm for teaching, style of presentation, and his energetic capacity define this factor. Other items loading on this dimension concerned the instructor's sense of humor and his ability to hold student interest. This dimension measures student perception of the instructor's flair and enthusiasm and the interest it produces in students.

Factor IV -- DIFFICULTY

This factor is defined by items describing the instructor's perception of student understanding and background knowledge and his pace of presentation. The item describing the relative difficulty of the course also loaded quite highly. This dimension measures student impressions of course difficulty.

Factor V -- LEARNING/VALUE

How much students receive from a course in terms of value, appreciation, and mastery of the course contents define this factor. This dimension measures the extent to which students felt that they had a valuable learning experience.

Factor VI -- INTERACTION/DISCUSSION

Items that dealt with how much the instructor encouraged and involved students in class discussion and how much he invites them to share their experiences and knowledge with the class define this factor. Items describing this factor are related to the freedom/encouragement students perceived in expressing their ideas and discussing topics and materials. This dimension measures the extent to which students felt free to interact and to participate in the class.

Factor VII -- INDIVIDUAL CONTACT

This factor is defined by items indicating how adequate the instructor's office hours are, how friendly he is, and how well he greets and recognizes students out of class. This component is obviously more appropriate in some classes than others and

is quite likely more relevant at some universities than others. This component describes the instructor's willingness to meet students on an individual basis. To what extent the instructor is willing to interact on apersonal level is what is measured by this dimension.

These seven factors are all very consistent and well defined in the factor solutions for the combined data and for the data of the worst instructors. In the solution on the best instructor data, all but one of the loading variable in the INDIVIDUAL CONTACT scale merge with the loading variables of the INTERACTION/ DISCUSSION scale, thus forming an INTERACTION/DISCUSSION and INDIVIDUAL CONTACT scale and a single element scale called OFFICE HOURS. Besides this merging of the one factor in the case of the best instructor data, all the solutions are quite consistent.

As previously mentioned, oblique solutions were used in defining the factors. As compared to the orthogonal solutions, the oblique rotations provide more meaningful solutions. The correlations between the factors are presented in Table V. The correlations between the factors do not exceed .40 when using the best instructor data and when using the worst instructor data. However, when using the combined data the correlations rise. These correlations are probably low enough that each of the factors is measuring a substantial portion of the total variance

which is unique. The highest correlations are those between the BREADTH factor and the INTEREST/DYNAMIC factor at .57, and between the INDIVIDUAL CONTACT and INTEREST/DYNAMIC factors at .51. The direction of the BREADTH factor and the ORGANIZATION/CLARITY factor was changed so that the items defining each factor load positively. These high correlations suggest the existence of the already mentioned hallo effect and its presence in instructional evaluation instruments.

It is interesting as the orthogonal solutions reveal, that the hallo effect is more pronounced when one is describing his worst instructor than his best instructor. The first two factors of the worst instructor data had many more loadings than the first two of the best instructor data. By adding the eigenvalues of the rotated solutions of the first two factors, sums of 28.35 and 24.67 resulted for the worst instructor data and best instructor data, respectfully. This result suggests that students are more discriminating when evaluating a good instructor than a poor instructor. That is to say that a student who dislikes an instructor will rate him lower in general and on more scales whereas a student who generally likes his instructor will be more apt to distinguish what he likes about him.

In this section it has been argued that factor analysis is a necessary statistical approach to develop an evaluation instrument that will allow the various dimensions of effective

teaching to be evaluated independently. Use of this technique minimizes the contaminating biases of the hallo effect and increases the liklihood of developing a more diverse and functional instrument.

RELIABILITY

Any justifiable and explainable measurement must utilize the underlying properties of reliability and validity. Thus reliability and validity are obviously desirable qualities of an evaluation instrument. Because of the lack of a clearly defined criteria of instructional quality, the validity of student ratings is difficult to test and measure. However, reliability, a measure of the consistency or stability of a measurement, is comparatively easy to measure.

To measure the reliability of each item, the item was listed twice each in a randomized order in the questionaire for the evaluation of the best instructor and for the worst instructor. Pearson-product-moment correlations were computed on each response for the best instructor data, the worst instructor data, and the combined data. Since a relatively large number of items was used, it has been assumed that memory had only a neglible effect on the reliabilities. It should be noted that there was virtually no time lag between the responses of the two items and that this would tend to increase the reliabilities. However, there is no

reason to assume that the rank ordering of these reliabilities would change if a time differential was implemented. Although the correlations of all the items are high, the relative magnitudes of each item's reliability can be used to distinguish the more reliable from the less reliable questions. The results are presented in Table VI.

Because of printing errors in the questionaire, the reliabilities of items 35, 36, 45, and 46 could not be computed. It should be noted that the items with specially designed scales for responding have slightly lower reliabilities, most likely because of range differences and carelessness in the students observing the different scales.

The desire for a "reliable" rating instrument is somewhat misleading for reliability is definitely a necessary condition for all items, but it is not a sufficient condition. Response biases such as the hallo effect may actually tend to increase reliabilities. Evidence to this effect is presented by the fact that the two "overall," items "What is your overall rating of this instructor?" and "What is your overall rating of this course? received the highest reliabilities. These items are clearly global and non-specific and thus more subject to the hallo effect.

Results of a sign test reveal that the reliabilities of the worst instructor data are significantly ($p > .001$) higher than those

of the best instructor data. This result is probably best described by the differing distributions of the evaluations of best and worst instructors. Evaluations for positively rated instructors have very negatively skewed distributions whereas evaluations of the worst instructors tend to have have normal or only slightly skewed distributions. This difference in distributions implies that many more categories are used for rating poor instructors than for good instructors. This reduction of the range caused by the skewed distribution of the best instructor appears to be a likely way to account for the smaller reliabilities of the best instructor data.

Reverting back to the factor solutions, it is noteworthy that the INTEREST/DYNAMIC dimension measures highest concerning reliabilities. Every item listed under this factor in Table I has a reliability exceeding .9.

In summarizing, the use of reliable questions in instruments of measurement is imperative, albeit, it is just as necessary to be able to recognize the response biases such as the hallo effect or that of the truncated range when selecting reliable items.

DISCRIMINATION

Another desirable characteristic of evaluating questions is that of discriminability. Discrimination in this study refers to the magnitude of the T value differences between the means of the worst instructor and the means of the best instructor data. Generally items that do not discriminate are less useful for they have less meaning in their measurement. For example, if the standard deviations are the same, an item that produces a 6 and a 4 (assume a 9 point scale) for the best and worst instructors respectively, is not as powerful an item as one that produces an 8 and a 2. Although impractical, it is optimum to find questions in which a sample of scores will produce a normal distribution, that is non-skewed. As the last section revealed, practical and useful evaluation questions will generally produce a negatively skewed distribution for students usually generously rate their instructors. Thus it is most useful to find questions that discriminate at the top end of the scale (Hildebrand, Wilson, Dienst, 1971).

To examine the discriminating characteristics of each item, T values were computed between the means of the worst instructor data and that of the best instructor data. As expected with the design of the test and large sample size, the T values are extremely high and therefore relative magnitudes rather than statistical

significance again serve to distinguish between discriminating and non-distriminating questions. Results are presented in Table VI.

The LEARNING/VALUE factor and INTERFST/DYNAMIC factor are the scales that best discriminate. That is, evaluations of best and worst instructors are polarized when these dimensions are being measured. This implies that students are most concerned about learning something of value from a course and that they desire and interesting, stimulating instructor.

It is worth noting that the INTEREST/DYNAMIC factor is one of the best discriminating factors, is the most reliable factor, and is the most highly correlated factor with the other obtained factors. These facts and the observation that the overall question "What is your overall rating of this instructor?" loads onto this factor, are the basis for my speculation that this factor is possibly more easily contaminated by the hallo effect.

It has also been observed that the more discriminating questions (top 50%) comprise the INTEREST/DYNAMIC, LEARNING/VALUE, and ORGANIZATION/CLARITY factors whereas the BREADTH, INTERACTION/DISCUSSION, DIFFICULTY, and INDIVIDUAL CONTACT factors are almost void of the most discriminating questions.

The DIFFICULTY factor is quite interesting in that only one of the three items in the factor had a significant T value.

That is, there is very little discrimination in these items. Examining items 17, 34, and 38 reveals that each has a special scale designed for each specific question. However, these scales certainly describe an easy to hard continuum in which to define the DIFFICULTY component. The results here indicate that students do not discriminate between best and worst instructors on the DIFFICULTY dimension. That is, contrary to the claims of many, students do not give low ratings simply because the course is difficult or high ratings for easy courses. This illustrates that the DIFFICULTY factor simply describes the relative difficulty of the course as taught by the instructor, and not whether the instructor is good or bad.

It has become apparent that the use of discriminating questions increases the measuring power of an instrument. Nevertheless, the discrimination criterion should not be used as a sole criterion for this will result in an instrument that measures an insufficient number of dimensions.

STUDENT OPINION

At the end of each evaluation, best instructor and worst instructor, students were asked to indicate which 5 questions were most important to them in evaluating effective teaching. The results of these nominations are listed in absolute frequencies and the maximum obtainable for each item is 502.

Items with the most nominations as most important question were found in the INTEREST/DYNAMIC factor and the LEARNING/VALUE factor. The previous section revealed that these dimensions were also the most discriminating. Closer inspection of Table VI reveals that a quite consistent and strong relationship exists between the student claimed most important questions and the discriminating questions. Questions that discriminate well are those that are most often mentioned as most important questions. This result indicates that students use the discrimination criteria as a primary element of their evaluations. It verifys that the students' subjective criteria of what is important in evaluating matches the objective criteria of discrimination which is used in this study.

SUMMARY -- FORMATION OF AN INSTRUMENT

The previous sections have described various criteria used in the construction of an evaluation instrument and how well these criteria are met by specific evaluation items. By carefully selecting items that have been examined by these criteria, a functional and workable instructional evaluation instrument is presented in Appendix III.

It is apparent that factor analysis has been the primary statistical approach implemented in the development of this

questionaire. This is necessary to enable the various components of effective teaching to be measured independently. For this reason items from each component have been included. A substantial loading in the factor pattern matrix of the combined data has been the necessary condition for inclusion. Items that loaded consisently across the best instructor data, worst instructor data and the combined data have been weighted more heavily toward selection. This insures that each component of teaching, as found in this study, is covered by the instrument.

Once the items of the various dimensions had been selected, the most discriminating and reliable of these were used. Although the DIFFICULTY factor is one in which none of the items adequately discriminate, it is included for it is perceived as being of definite importance in evaluating an instructor or class.

Four items that do not load highly into any specific factor have also been included in the instrument. Items 32 and 4, which load very slightly on the INTEREST/DYNAMIC factor, are included because they are very discriminating and reliable items. Also the overall rating items, 18 and 19, are included for the same reasons. All four of these items were popular choices of students as the most important questions. These four questions are quite global and thus probably more susceptible to the hallo effect.

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FOOTNOTES

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TABLE I

DIMENSIONS OF EFFECTIVE TEACHING
AND THEIR DEFINING ITEMS

BREADTH

30 -- The instructor discussed points of view other than his own
47 -- The instructor contrasts the implications of various theories
48 -- The instructor adequately discusses recent developments in the field
49 -- The instructor adequately presents the origin of ideas and concepts
56 -- Does the instructor invite criticism of his own ideas

ORGANIZATION/CLARITY

51 -- Relative to other courses, the instructor's lectures are easy to outline
2 -- The course objectives were adequately outlined so that you knew where the course was going
35 -- Adequate time was distributed over course topics
1 -- The purpose of class assignments was made clear and was integrated into the overall course structure
28 -- The instructor was helpful in emphasis and summarization of main points during presentations
50 -- The instructor's explanations are clear
24 -- The course successfully integrated lecture materials and outside assignments
25 -- To what extent was the workload evenly distributed over the quarter
23 -- Agreement between proposed course objectives and those actually taught

INTEREST/DYNAMIC

61 -- The instructor is dynamic and energetic
62 -- The instructor has an interesting style of presentation
63 -- The instructor enjoys teaching
5 -- The instructor was enthusiastic about teaching the course
18 -- What is your overall rating of the instructor
64 -- The instructor has a sense of humor
32 -- The instructor held your interest

DIFFICULTY

38 -- Did the instructor pace his presentations to the understanding of the class
17 -- Relative to other courses, how difficult was it to master the contents of the course
34 -- The instructor accurately gauged student background and knowledge in the subject

LEARNING/VALUE

15 -- You learned something of value from the course
46 -- You have developed an increased appreciation for the subject
16 -- How adequately do you feel that you have mastered the contents of the course
40 -- The examinations were of instructional value
41 -- The assignments were interesting and stimulating
20 -- To what extent did the course meet your objectives for taking the course
13 -- The instructor stimulated your intellectual curiosity in the subject

INTERACTION/DISCUSSION

53 -- Does the instructor encourage class discussion
8 -- Given the constraints of the course, does the instructor involve students in class discussion
54 -- Does the instructor adequately invite students to share their knowledge and experiences
26 -- Does the instructor allow a few students to monopolize class discussion
59 -- The instructor relates to students as individuals

INDIVIDUAL CONTACT

9 -- The instructor had adequate office hours during which he/she was available
60 -- The instructor recognizes and greets students out of class
58 -- The instructor is friendly toward students
10 -- The instructor was easy to approach and made you feel welcome in seeking his help
57 -- The instructor has a genuine interest in the students
59 -- The instructor relates to students as individuals

TABLE II -- SOLUTIONS FOR COMBINED DATA

ITEM	BREADTH	ORGANIZATION/ CLARITY	INTEREST/ DYNAMIC	DIFFICULTY	LEARNING/ VALUE	INTERACTION/ DISCUSSION	INDIVIDUAL CONTACT
30	.81	.01	-.04	.02	.04	-.01	.02
47	.73	-.09	.05	.11	.05	.05	-.08
48	.55	-.07	.14	.11	.01	.08	.01
49	.48	-.24	.26	.03	.02	.01	-.01
56	.44	-.04	.10	-.01	.04	.29	.18
51	-.05	.60	.09	-.13	.18	.08	.00
02	.23	-.55	.05	.06	.12	.02	.11
01	-.16	-.53	-.03	.08	.20	.06	.25
35	-.13	-.51	.04	-.13	.12	.01	.15
28	.20	-.49	.13	.08	.16	.06	.13
61	-.11	.06	.73	-.01	.06	.03	.17
62	-.08	-.01	.68	-.03	.22	-.03	.12
63	-.11	-.04	.68	.01	-.05	.02	.26
05	-.07	-.02	.67	-.04	.16	.01	.06
32	.00	-.09	.64	.02	.33	.05	.04
38	-.01	.03	-.02	.71	-.07	.03	.03
17	-.09	.17	-.02	.69	-.08	-.05	.08
34	-.05	-.03	-.05	.50	.00	.04	-.05
15	-.06	-.07	.24	.01	.69	-.01	.05
46	-.14	-.07	.32	-.08	.53	.05	.04
16	-.05	-.25	.06	-.28	.53	.07	.02
40	-.10	-.20	-.12	.03	.50	.07	.02
41	-.22	-.10	.15	-.09	.49	.12	.02
08	-.03	-.10	.01	.03	-.07	.75	.00
53	-.15	-.12	.08	-.01	-.01	.72	.03
54	.26	-.14	.11	.09	-.05	.52	.23
26	.11	.17	-.13	.02	.00	.48	.01
60	.04	.06	.12	.03	.05	.29	.65
09	-.06	-.03	.07	.05	.02	.00	.65
58	-.07	.07	.35	-.04	-.01	.10	.63
10	-.06	-.09	.14	-.03	.02	.19	.63
57	-.06	-.05	.37	-.02	.04	.16	.51

TABLE IV -- SOLUTIONS FOR WORST DATA

ITEM	BREADTH	ORGANIZATION/ CLARITY	INTEREST/ DYNAMIC	DIFFICULTY	LEARNING/ VALUE	INTERACTION/ DISCUSSION	INDIVIDUAL CONTACT
30	.82	.09	.04	-.02	.06	-.02	.02
47	.75	-.11	.02	-.11	-.15	.00	.09
48	.51	.07	.15	-.13	.01	.03	-.04
49	.48	-.27	.24	-.05	-.03	-.03	.04
56	.38	-.05	.19	.04	-.06	.30	-.16
51	-.01	-.65	.02	.12	.21	.01	.09
02	.20	-.62	-.01	-.09	-.15	-.01	.02
01	.11	-.58	-.01	-.13	.20	.04	-.18
50	.06	-.57	.44	.13	-.10	.01	.06
28	.16	-.55	.07	.07	-.20	.02	-.10
61	.13	.06	.69	.01	-.13	.06	-.11
63	.13	-.06	.68	-.03	.05	.01	-.25
05	.11	-.02	.66	-.04	.05	.07	-.24
62	.06	-.03	.63	.04	-.30	.02	-.05
32	-.13	.07	.59	-.08	.44	.09	-.08
17	.08	.20	-.01	.82	-.01	-.05	-.16
38	.08	.06	.03	.70	.02	-.02	.00
34	.10	.02	.07	.50	.05	.03	.04
27	.16	-.15	.07	.48	.15	.02	.11
15	-.03	-.02	.02	-.03	.86	-.05	.06
46	.09	.02	.15	.10	.71	.02	.01
13	.10	-.03	.40	-.02	.68	.11	.05
37	.07	-.09	.13	-.20	.58	-.16	.02
19	.18	-.15	.19	-.04	.58	.09	.11
53	.06	-.10	.06	.01	.07	.82	-.02
08	.01	-.06	.03	-.02	.08	.78	.08
54	.25	-.17	.15	.11	.05	.58	-.15
26	.11	.13	.10	-.01	.02	.54	.07
59	.01	-.04	.28	.03	.01	.45	.35
09	-.14	-.10	.12	-.11	.07	.01	.77
60	-.01	.08	.15	.01	.07	.33	.63
58	.13	.08	.41	.04	.00	.18	.52
57	.06	.03	.40	.05	-.04	.27	.50
10	.13	-.16	.17	.05	.03	.29	.45

TABLE III -- SOLUTIONS FOR BEST DATA

ITEM	BREADTH	ORGANIZATION/ CLARITY	INTEREST/ DYNAMIC	DIFFICULTY	LEARNING/ VALUE	INDIVID. CONTACT/ INTERACTION	OFFICE HOURS
30	.57	.03	-.05	.03	.03	.01	.30
56	.57	.08	-.14	.04	.02	.40	.03
47	.55	.08	.07	.25	.02	.01	-.07
48	.52	.10	.15	.01	.02	.05	.16
49	.47	.23	.12	-.11	.02	.10	.10
35	-.01	.58	.00	.00	-.17	.08	.12
28	-.27	.57	.00	.05	.11	.17	.03
25	.05	.57	-.17	.04	-.16	.03	.16
01	-.14	.54	-.17	-.12	.22	.27	.10
02	-.20	.53	.08	.03	.10	.15	.01
63	.01	.01	.76	.03	.01	.25	.04
62	-.03	.04	.75	.01	.10	.09	.33
18	.10	.08	.73	.09	-.19	.15	-.12
61	-.07	.14	.69	-.02	.18	.06	.30
05	-.09	.03	.67	.00	.07	.27	.04
38	.02	-.04	-.01	.71	.09	.05	.08
17	.22	-.01	.07	.47	.24	.02	.05
34	.03	.08	.03	.47	-.05	.07	-.04
16	.06	.16	.10	.15	.64	.08	.20
15	-.12	.09	.38	.03	.56	-.10	.11
40	.09	.17	.06	.03	.51	.25	.07
20	.03	.10	.32	.00	.49	.04	.00
41	.31	.07	.09	.03	.47	.03	.15
59	-.03	.03	.02	.11	-.02	.71	.03
60	.09	-.04	.09	-.03	.07	.69	.22
54	-.37	-.16	-.05	.05	-.04	.69	-.01
10	.12	.13	.10	.10	.12	.69	.39
58	.15	.12	.30	.09	.10	.65	.24
09	.08	.09	.08	.07	.05	.06	.81

TABLE V -- INTERCORRELATIONS OF FACTORS
COMBINED DATA

	ORGANIZATION	INTERACTION/ DISCUSSION	DIFFICULTY	INTEREST/ DYNAMIC	LEARNING/ VALUE	BREADTH	INDIVIDUAL CONTACT
ORGANIZATION	1.00	.12	.07	.48	.45	.44	.40
INTERACTION		1.00	.03	.26	.30	.30	.39
DIFFICULTY			1.00	.02	.05	.04	-.09
INTEREST				1.00	.45	.57	.51
LEARNING					1.00	.40	.32
BREADTH						1.00	-.52
IND. CONTACT							1.00

BEST INSTRUCTOR DATA

	BREADTH	INDIVIDUAL CONT./ INTERACTION	INTEREST/ DYNAMIC	ORGANIZATION	DIFFICULTY	LEARNING/ VALUE	OFFICE HOURS
BREADTH	1.00	.33	.39	.30	.12	.32	.20
IND. CONTACT		1.00	.19	.18	.06	.24	.27
INTEREST			1.00	.30	.07	.24	.24
ORGANIZATION				1.00	.05	.20	.09
DIFFICULTY					1.00	.16	.02
LEARNING						1.00	.21
OFFICE HOURS							1.00

WORST INSTRUCTOR DATA

	ORGANIZATION	INTERACTION/ DISCUSSION	DIFFICULTY	LEARNING/ VALUE	INTEREST/ DYNAMIC	BREADTH	INDIVIDUAL CONTACT
ORGANIZATION	1.00	.16	.06	.39	.32	.30	.29
INTERACTION		1.00	.00	.27	.25	.27	.27
DIFFICULTY			1.00	.02	.01	-.07	-.09
LEARNING				1.00	.23	.29	.27
INTEREST					1.00	.37	.34
BREADTH						1.00	.31
IND. CONTACT							1.00

NOTE: COMBINED DATA -- DIRECTION OF ORGANIZATION AND BREADTH FACTORS WAS CHANGED
BEST INSTRUCTOR DATA -- DIRECTION OF THE BREADTH, LEARNING/VALUE, AND DIFFICULTY FACTORS WAS CHANGED
WORST INSTRUCTOR DATA -- DIRECTION OF THE ORGANIZATION, DIFFICULTY, LEARNING/VALUE, AND INDIVIDUAL CONTACT FACTORS WAS CHANGED

TABLE VI

ITEM	BEST	WORST	T-VALUE	RELIABILITIES			MIQ
	$\bar{X}$	$\bar{X}$		BEST	WORST	BOTH	
1	7.33	4.99	16.17**	.66**	.70**	.78**	21
2	7.41	4.93	15.49**	.78**	.86**	.89**	32
3	7.20	4.92	12.97**	.84**	.81**	.86**	79
4	7.80	4.43	21.05**	.59**	.82**	.87**	119
5	8.09	5.05	18.46**	.73**	.87**	.90**	59
6	7.47	4.58	18.91**	.79**	.81**	.88**	50
7	7.17	4.41	17.51**	.77**	.87**	.89**	31
8	4.93	4.12	5.12**	.61**	.82**	.77**	15
9	7.66	5.78	5.48**	.89**	.96**	.94**	19
10	7.19	4.53	12.95**	.83**	.80**	.89**	32
11	7.21	4.61	16.60**	.72**	.81**	.86**	19
12	7.62	5.72	9.82**	.95**	.96**	.96**	26
13	7.52	3.64	25.61**	.68**	.79**	.89**	68
14	6.22	4.66	6.48**	.94**	.89**	.92**	25
15	7.78	4.54	20.13**	.72**	.84**	.89**	61
16	7.19	4.64	15.60**	.87**	.91**	.93**	23
17	5.39	5.89	-2.60**	.81**	.79**	.80**	23
18	8.15	4.15	27.30**	.87**	.95**	.97**	56
19	7.92	3.85	27.62**	.83**	.94**	.97**	95
20	7.47	4.08	20.30**	.79**	.92**	.93**	31
21	7.57	5.17	15.74**	.57**	.79**	.81**	16
22	3.77	4.04	-1.35	.72**	.85**	.78**	11
23	7.61	5.23	15.72**	.67**	.86**	.87**	32
24	7.20	4.84	14.71**	.71**	.67**	.77**	23
25	7.07	5.54	10.13**	.87**	.89**	.90**	15
26	3.56	4.16	-3.23**	.82**	.68**	.75**	12
27	7.00	5.50	7.16**	.90**	.89**	.90**	30
28	7.36	4.59	19.00**	.66**	.80**	.85**	39
29	7.34	4.43	19.85**	.77**	.86**	.91**	29
30	6.89	4.70	12.57**	.65**	.68**	.73**	31
31	7.15	4.43	17.59**	.78**	.80**	.87**	73
32	7.77	3.22	30.13**	.72**	.83**	.92**	110
33	7.87	7.00	4.93**	.78**	.81**	.80**	11
34	5.43	5.30	.82	.58**	.81**	.75**	24
35	7.22	5.07	15.37**				21

ITEM	BEST	WORST	T-VALUE	RELIABILITIES			MIQ
	$\bar{X}$	$\bar{X}$		BEST	WORST	BOTH	
36	6.65	4.05	14.41**				49
37	7.62	4.80	15.58**	.74**	.77**	.83**	87
38	5.41	5.61	-1.53	.53**	.63**	.61**	60
39	6.27	4.50	9.71**	.66**	.76**	.75**	15
40	6.94	4.35	15.94**	.77**	.74**	.83**	53
41	6.49	3.52	17.21**	.85**	.90**	.93**	61
42	6.61	4.20	11.27**	.78**	.81**	.83**	11
43	7.92	4.15	20.81**	.69**	.81**	.87**	63
44	7.10	4.25	17.07**	.70**	.83**	.86**	28
45	7.42	5.02	16.85**				13
46	7.40	3.80	22.53**				71
47	6.96	4.77	12.45**	.73**	.79**	.82**	19
48	7.08	5.12	10.94**	.76**	.74**	.79**	19
49	7.37	4.99	16.42**	.73**	.68**	.79**	11
50	7.52	4.90	20.24**	.61**	.80**	.85**	46
51	7.17	4.65	14.78**	.82**	.77**	.84**	25
52	7.45	4.73	18.12**	.66**	.80**	.85**	15
53	6.29	4.37	9.79**	.82**	.80**	.84**	24
54	6.61	4.19	12.84**	.60**	.79**	.78**	14
55	7.05	4.66	17.21**	.57**	.66**	.75**	8
56	6.54	3.96	14.04**	.79**	.81**	.85**	32
57	7.51	4.48	19.56**	.73**	.80**	.87**	47
58	7.58	5.16	14.97**	.79**	.86**	.88**	3
59	6.78	4.51	11.70**	.92**	.88**	.92**	16
60	6.21	3.81	10.70**	.86**	.89**	.90**	10
61	7.80	4.28	19.59**	.83**	.91**	.93**	38
62	7.60	3.62	24.71**	.88**	.85**	.93**	51
63	8.07	5.08	17.89**	.82**	.94**	.95**	70
64	7.81	4.92	16.22**	.70**	.90**	.90**	61
65	6.58	4.23	12.38**	.78**	.83**	.85**	22

* significant at .05
** significant at .001

MIQ - Most Important Question

APPENDIX I -- THE SURVEY INSTRUMENT

NAME _____ NUMBER OF QUARTERS COMPLETED AT UCLA _____

SEX _____ G.P.A. (AT UCLA) _____ MAJOR AREA _____

This is a study designed to determine the most important features students use in evaluating good and bad lecture courses. Think back to the courses which you took during the fall quarter and select the best and worst lecture course. Begin by filling in the biographical information below, and then read the rest of the instructions at the bottom of the page.

	BEST COURSE	WORST COURSE
1. Instructor's name		
2. Department of the course		
3. Course number		
4. Approximate course enrollment		
5. Was the course in your major? (1-yes, 2-no)		
6. What grade did you receive?		
7. What was your level of interest in the subject before the course? (1-high, 2-medium, 3-low)		
8. What was your level of interest in the subject after the course? (1-high, 2-medium, 3-low)		
9. Why did you take this course? (select one of the below) 1. Major requirement 2. Major elective 3. Breadth requirement 4. General interest 5. Easy Credit/grade 6. Other		
10. On the average, how many hours per week did you spend outside of class?	_____ Hours	_____ Hours

After you have completed the above materials, read these instructions and begin by responding to the questions on the following pages. Answer each of the questions separately and do not refer back to previous responses even though many of the questions are the same or very similar.

Each of the questions are to be answered along the nine-point response scale listed below, unless another scale is indicated with the question. Do not use the NA (not appropriate) response unless the question is clearly not relevant to the course. After you have completed rating the first course, you are to go back over the set of questions and select the five questions which were most important in describing your overall learning experience in the course.

Once you have completed the rating and selected the most important questions for the first course which you rate, please follow the same procedures for the second course. If you have any questions, please raise your hand.

THANK YOU FOR YOUR COOPERATION. THE RESULTS OF THIS EXPERIMENT WILL BE IMPORTANT TO THE IMPROVEMENT OF INSTRUCTIONAL EVALUATION AT UCLA AS WELL AS MAKING AN IMPORTANT RESEARCH PROJECT.

NA	1	2	3	4	5	6	7	8	9
not appropriate	very low or never		low or never		average		high or frequently		very high or always

ANSWER EACH OF THE QUESTIONS ON THE FOLLOWING PAGES BY PUTTING A NUMBER BETWEEN ONE AND NINE (or NA) IN THE BLANK TO THE LEFT OF EACH QUESTION.

NAME:_____

Please evaluate the best lecture course using the list of 130 questions which appear below and on the back of this page.

TO WHAT EXTENT DO YOU FEEL THAT:

____ 1. ...graded materials (exams, papers, etc.) fairly and objectively measured the course contents as empathasized in class?

____ 2. Did your instructor pace his presentations to the understanding of the class? (Use this scale: 1--too slow,...5--about right,...9--too fast)

____ 3. Relative to other courses, how difficult was it to master the contents of this course? (Use this scale: 1--much easier,...5--about average,...9--much harder)

____ 4. ...the instructor held your interest during lectures?

____ 5. ...the course successfully integrated lecture materials and outside assignments?

____ 6. ...the instructor is a dynamic and energetic person?

____ 7. ...the instructor discussed points of view other than his/her own?

____ 8. ...graded materials fairly and objectively measured the course contents as empathasized in class?

____ 9. To what extent was class attendence important to the learning in this course?

____10. ...the instructor was unnecessarily harsh or embarassing to students? (Use this scale: 1--very much so, ...9--not at all)

____11. ...the instructor claridies thinking by identifying reasons for questions?

____12. Relative to other courses, how adequately do you feel that you have mastered the contents of this course?

____13. ...the instructor accurately gauged student background knowledge in the subject? (Use this scale: 1--underestimated,...5--about right,...9--over-estimated)

____14. ...the instructor understands what a student is asking or telling him?

____15. ...the instructor relates to students as individuals?

____16. Relative to other courses, how adequately do you feel that you have mastered the contents of this course?

____17. ...the instructor was unnecessarily harsh or embarassing to students? (Use this scale: 1--very much so,...9--not at all)

____18. ...the instructor relates to students as individuals?

____19. To what extent did the course meet your objectives for taking the course?

____20. ...the instructor stresses the aesthetic and emotional value of the subject?

____21. ...the instructor accurately gauged student background knowledge in the subject? (Use this scale: 1--underestimated,...5--about right,...9--over-estimated)

____22. ...the instructor adequately discusses recent developments in the field?

____23. ...you learned something of value from this course?

____24. To what extent did the course meet your objectives for taking the course?

____25. ...the instructor recognizes and greets students out of class?

____26. ...the instructor is well informed about the progress of the class?

____27. What is your overall rating of this instructor?

____28. ...the instructor is friendly toward students?

____29. ...the instructor is a dynamic and energetic person?

____30. What is your overall rating of this instructor?

____31. Does the instructor encourage class discussion?

____32. ...the instructor is friendly toward students?

____33. Relative to other courses, how difficult was it to master the contents of this course? (Use this scale: 1--much easier,...5--about average,... 9--much harder)

____34. ...the examinations were of instructional value?

____35. ...the instructor is well informed about the progress of the class?

____36. ...the instructor is careful and precise in answering questions?

____37. ...the instructor had adequate office hours during which he/she was available? (Mark NA if you did not try to see him/her)

____38. ...the instructor was enthusiastic about teaching the course?

____39. How much did the lectures add to what you knew about the subject before taking the course? (Use this scale: 1--very little,...5--about average,... 9--very much)

____40. ...the instructor has a genuine interest in the students?

____41. To what extent was the instructor able to keep class discussion relevant and to the point?

____42. ...the instructor has a sense of humor?

____43. ...the instructor clarifies thinking by identifying reasons for questions?

____44. To what extent was the workload evenly distributed over the quarter?

____45. ...the instructor stimulated your intellectual curiosity in the subject?

____46. ...the instructor enjoys teaching?

____47. To what extent, relative to other courses, do students get away with cheating on examinations?

____48. To what extent was the workload evenly distributed over the quarter?

____49. ...the instructor is careful and precise in answering questions?

____50. ...the instructor enjoys teaching?

____51. Relative to other courses, are the instructor's lectures easy to outline?

____52. ...you learned something of value from this course?

____53. To what extent was the instructor able to keep class discussion relevant and to the point?

____54. ...the instructor had adequate office hours during which he/she was available? Mark NA if you did not try to see him/her)

____55. ...that adequate time was appropriately distributed over course topics?

____56. ...the instructor adequately presents the origin of ideas and concepts?

____57. ...the instructor, given the constraints of the course, involved students in class discussion? (Use this scale: 1--far to little,...5--about right,...9--far to much)

____58. ...the instructor understands what a student is asking or telling him/her?

____59. What was the nature of learning empathasized in this course? (Use this scale: 1--specific facts, ...9--conceptual ideas)

____60. ...the instructor's explanations are clear?

____61. ...the instructor greets and recognizes students out of class?

____62. To what extent does the instructor allow a few students to monopolize class discussion?

_____ 63. ...the instructor knows which parts of the course are most difficult and works on making them easier?

_____ 64. To what extent, relative to other classes, do students get away with cheating on examinations?

_____ 65. ...the instructor was helpful in emphasis and summarization of main points during presentation?

_____ 66. ...the instructor gave class presentations that were prepared and organized in a way that made the subject more understandable?

_____ 67. Did the lectures impart intuition about the subject? (Use this scale: 1--never,...9--always)

_____ 68. ...the instructor, given the constraints of the course, involved students in class discussion? (Use this scale: 1--far to little,...5--about right, ...9--far to much)

_____ 69. ...the instructor was concerned that students understood the course materials?

_____ 70. ...the instructor held your interest during lectures?

_____ 71. ...the instructor stresses the aesthetic and emotional value of the subject?

_____ 72. ...the instructor adequately presents the origin of ideas and concepts?

_____ 73. ...the instructor appeared considerate of student feelings, problems, and point of view?

_____ 74. ...the instructor was enthusiastic about teaching the course?

_____ 75. ...the purpose of class assignments was made clear and was integrated into the overall course structure?

_____ 76. ...the instructor appeared considerate of student feelings, problems, and point of view?

_____ 77. ...the instructor knows which parts of the course are most difficult and works on making them easier?

_____ 78. ...the instructor contrasts the implications of various theories?

_____ 79. To what extent was class attendence important to the learning in this course?

_____ 80. To what extent does the instructor encourage class discussion?

_____ 81. ...the instructor stimulated your intellectual curiosity in the subject?

_____ 82. the instructor gave clear and meaningful answers to student questions?

_____ 83. ...the instructor gave class presentations that were prepared and organized in a way that made the subject more understandable?

_____ 84. the instructor has an interesting style of presentation?

_____ 85. ...the instructor was free from speech or language habits which interfered with communication?

_____ 86. ...you have developed an increased appreciation for the subject?

_____ 87. ...the instructor contrasts the implications of various theories?

_____ 88. ...adequate time was appropriately distributed over course topics?

_____ 89. To what extent has feedback from graded materials been valuable to your learning experience in this course?

_____ 90. ...the instructor adequately discusses recent developments in the field?

_____ 91. ...the instructor has a genuine interest in the students?

_____ 92. What was the nature of learning empathasized in this course? (Use this scale: 1--specific facts,... 9--conceptual understanding)

_____ 93. ...the assignments were interesting and stimulating?

_____ 94. ...you have developed an increased appreciation for the subject?

_____ 95. Does the instructor invite criticism of his own ideas?

_____ 96. Did the lectures impart intuition about the subject? (Use this scale: 1--never,...9--always)

_____ 97. ...the assignments were stimulating and interesting?

_____ 98. ...the instructor relates class topics to students' lives and experiences?

_____ 99. ...the instructor was helpful in emphasis and summarization of main points during presentation?

_____ 100. ...the instructor attempted to make course materials more relevant by discussing their implications or applications?

_____ 101. ...the purpose of class assignments was made clear and integrated into the overall course structure?

_____ 102. ...the instructor realize whether he is being understood or not?

_____ 103. ...the instructor attempted to make course materials more relevant by discussing their implications?

_____ 104. ...the course objectives were adequately outlined so that you knew where the course was going?

_____ 105. ...the instructor was easy to approach and made you feel welcome in seeking out his/her help?

_____ 106. What is your overall rating of this course?

_____ 107. ...the instructor was concerned that students understood the course materials?

_____ 108. To what extent was there agreement between the proposed course objectives of the course and those which were actually taught?

_____ 109. ...the instructor gave clear and meaningful answers to student questions?

_____ 110. Does the instructor adequately invite students to share their knowledge and experiences?

_____ 111. What is your overall rating of this course?

_____ 112. ...the instructor discussed points of view other than his/her own?

_____ 113. ...the instructor was easy to approach and made you feel welcome in seeking out his/her help?

_____ 114. Did your instructor pace his presentations to the understanding of the class? (Use this scale: 1--too slow,...5--about right,...9--too fast)

_____ 115. ...the instructor has an interesting style of presentation?

_____ 116. ...the course successfully integrated lecture materials and outside assignments?

_____ 117. ...the instructor was free from speech or language habits which interfered with communications?

_____ 118. ...the course objectives were adequately outlined so that you knew where the course was going?

_____ 119. How much did the lectures add to what you knew about the subject before taking the course? (Use this scale: 1--very little,...5--about average,... 9--very much)

_____ 120. To what extent was there agreement between the proposed course objectives of the course and those which were actually taught?

_____ 121. ...the instructor has a sense of humor?

_____ 122. Does the instructor adequately invite students to share their knowledge and experiences?

_____ 123. ...the examinations were of instructional value?

_____ 124. ...the instructor relates class topics to students' lives and experiences?

_____ 125. To what extent does the instructor allow a few students to monopolize class discussion?

_____ 126. ...the instrucor's explanations are clear?

_____ 127. Relative to other courses, are the instructor's lectures easy to outline?

_____ 128. To what extent has feedback from graded materials been valuable to your learning experience in this course?

_____ 129. Does the instructor invite criticism of his own ideas?

_____ 130. ...the instructor realizes whether he is being understood or not?

PLEASE INDICATE THE FIVE QUESTIONS WHICH YOU FELT WERE MOST IMPORTANT IN DESCRIBING EITHER POSITIVE OR NEGATIVE ASPECTS OF YOUR OVERALL LEARNING EXPERIENCE IN THIS COURSE BY WRITING IN THE NUMBER OF THOSE QUESTIONS IN THE BLANKS BELOW. (Do not list the same question more than once)

#_____ #_____ #_____ #_____ #_____

NAME: _____

Please evaluate the worst lecture course using the list of 130 questions which appear below and on the back of this page.

TO WHAT EXTENT DO YOU FEEL THAT:

____ 1. To what extent was class attendence important to the learning in this course?

____ 2. ...the instructor stimulated your intellectual curiosity in the subject?

____ 3. ...the instructor was easy to approach and made you feel welcome in seeking out his/her help?

____ 4. Does the instructor adequately invite students to share their knowledge and experiences?

____ 5. ...the instructor recognizes and greets students out of class?

____ 6. ...the instructor adequately presents the origin of ideas and concepts?

____ 7. ...the instructor is well informed about the progress of the class?

____ 8. ...the instructor relates to students as individuals?

____ 9. To what extent was the workload evenly distributed over the quarter?

____10. To what extent, relative ot other classes, do students get away with cheating on examinations?

____11. Relative to other courses, how difficult was it to master the contents of this course? (Use this scale: 1--much easier,...5--about average,... 9--much harder)

____12. To what extent was the workload evenly distributed over the quarter?

____13. ...you have developed an increased appreciation for the subject?

____14. ...the instructor relates to students as individuals?

____15. ...the instructor contrasts the implications of various theories?

____16. ...the instructor, given the constraints of the class, involved students in class discussion? (Use this scale: 1--far to little,...5--about right, ...9--far to much)

____17. ...the instructor has a sense of humor?

____18. To what extent was the instructor able to keep class discussion relevant and to the point?

____19. ...the instructor adequately presents the origin of ideas and concepts?

____20. ...the instructor is friendly toward students?

____21. ...you learned something of value from this course?

____22. ...the instructor was free from speech or language habits which interfered with communications?

____23. ...the instructor clarifies thinking by identifying reasons for questions?

____24. ...adequate time was appropriately distributed over course topics?

____25. To what extent was the instructor able to keep class discussion relevant and to the point?

____26. ...the instructor stimulated your intellectual curiosity in the subject?

____27. the instructor was free from speech or language habits which interfered with communications?

____28. ...the purpose of class assignments was made clear and was integrated into the overall course structure?

____29. ...the instructor accurately guaged student background knowledge in the subject? (Use this scale: 1--underestimate,...5--about right,... 9--overestimated)

____30. ...the instructors explanations are clear?

____31. Relative to other courses, how difficult was it to master the contents of this course? (Use this scale: 1--much easier,...5--about average,...9--much harder)

____32. To what extent was class attendence important to the learning in this course?

____33. ...the instructor attempted to make course materials more relevant by discussing their implications and/or applications?

____34. Did the lectures impart intuition about the subject? (Use this scale: 1--never,...5--always)

____35. To what extent does the instructor allow a few students to monopolize class discussion?

____36. To what extent did the course meet your objectives for taking the course?

____37. ...adequate time was appropriately distributed over course topics?

____38. ...the instructor gave class presentations that were prepared and organized in a way that made the subject more understandable?

____39. ...the instructor was easy to approach and made you feel welcome in seeking out his/her help?

____40. ...the instructor is careful and precise in answering questions?

____41. ...the instructor was enthusiastic about teaching the course?

____42. ...the instructor contrasts the implications of various theories?

____43. ...the instructor is a dynamic and energetic person?

____44. ...the instructor held your interests during lectures?

____45. ...the instructor has an interesting style of presentation?

____46. What was the nature of learning empathasized in this course? (1--specific facts,...9--conceptual learning)

____47. To what extent did the course meet your objectives for taking the course?

____48. ...the instructor attempted to make course materials more relevant by discussing their implications and/or applications?

____49. To what extent does the instructor allow a few students to monopolize class discussion?

____50. Did your instructor pace his presentations to the understanding of the class? (Use this scale: 1--too slow,...5--about right,...9--too fast)

____51. To what extent has feedback from graded materials been valuable to your learning experience in this course?

____52. ...the instructor understands what a student is asking or telling him?

____53. Relative to other courses, how adequately do you feel that you have mastered the contents of this course?

____54. ...the instructor discussed points of view other than his/her own?

____55. the instructor realizes whether he is being understood or not?

____56. What was the nature of learning empathasized in this course? (Use this scale: 1--specific facts,... 9--conceptual understanding)

____57. ...the instructor has an interesting style of presentation?

____58. ...the instructor has a genuine interest in the students?

____59. ...the instructor stresses the aesthetic and emotional value of the subject?

____60. Relative to other courses, are the instructor's lectures easy to outline?

____61. ...the instructor was helpful in emphasis and summarization of main points during presentation?

____62. ...the instructor is friendly toward students?

____63. Does the instructor invite criticism of his own ideas?

____64. ...the instructor was concerned that students understood the course materials?

_____ 65. ...the instructor is a dynamic and energetic person?

_____ 66. ...the instructor was unnecessarily harsh or embarassing to students? (Use this scale: 1--very much so,...9--not at all)

_____ 67. ...the instructor's explanations are clear?

_____ 68. ...the instructor accurately gauged student background knowledge in the subject? (Use this scale: 1--underestimated,...5--about right,...9--overestimated)

_____ 69. Relative to other courses, are the instructor's lectures easy to outline?

_____ 70. ...the instructor was concerned that students understood the course materials?

_____ 71. ...the instructor has a genuine interest in the students?

_____ 72. Relative to other courses, how adequately do you feel that you have mastered the contents of this course?

_____ 73. ...the examinations were of instructional value?

_____ 74. ...the instructor was unneccessarily harsh or embarassing to students? (Use this scale: 1--very much so,...9--not at all)

_____ 75 Did your instructor pace his presentations to the understanding of the class? (Use this scale 1--too slow,...5--about right,...9--too fast)

_____ 76. ...the course objectives were adequately outlined so that you knew where the course was going?

_____ 77. Does the instructor invite criticism of his own ideas?

_____ 78. ...the instructor recognizes and greets students out of class?

_____ 79. ...the instructor understands what a student is asking or telling him?

_____ 80. How much did the lectures add to what you knew about the subject before taking the course? (Use this scale: 1--very little,...5--about average,... 9--very much)

_____ 81. ...the instructor is careful and precise in answering questions?

_____ 82. ...the instructor had adequate office hours during which he/she was available? (Mark NA if you did not try to see him/her)

_____ 83. ...the instructor adequately discusses recent developments in the field?

_____ 84. ...you have developed an increased appreciation for the subject?

_____ 85. ...the instructor relates class topics to students' lives and experiences?

_____ 86. ...the instructor, given the constraints of the course, involved students in class discussion? (Use this scale: 1--far to little,...5-about right,... 9--far to much)

_____ 87. ...the course successfully integrated lecture materials and outside assignments?

_____ 88. ...the instructor has a sense of humor?

_____ 89. ...the instructor discussed points of view other than his/her own?

_____ 90. graded materials (exams, papers, etc.) fairly and objectively measured the course contents as empathasized in class?

_____ 91. Does the instructor adequately invite students to share their knowledge and experiences?

_____ 92. ...the instructor was enthusiastic about teaching the course?

_____ 93. To what extent has feedback from grades materials been valuable to your learning in this course?

_____ 94. ...the instructor enjoys teaching?

_____ 95. To what extent was there agreement between the proposed course objectives of the course and those which were actually taught?

_____ 96. How much did the lectures add to what you knew about the subject before taking the course? (Use this scale: 1--very little,...5--about average,... 9--very much)

_____ 97. ...the instructor appeared considerate of student feelings problems, and point of view?

_____ 98. ...you learned something of value from this course?

_____ 99. ...the instructor clarifies thinking by identifying reasons for questions?

_____100. What is your overall rating of this instructor?

_____101. ...the instructor held your interest during lectures?

_____102. ...the instructor appeared considerate of student feelings, problems, and point of view?

_____103. ...the instructor adequately discusses recent developments in the field?

_____104. ...the instructor was helpful in emphasis and summarization of main points during presentation?

_____105. What is your overall rating of this instructor?

_____106. ...the instructor knows which parts of the course are most difficult and works on making them easier?

_____107. ...the assignments were interesting and stimulating?

_____108. What is your overall rating of this course?

_____109. ...the examinations were of instructional value?

_____110. ...the purpose of class assignments was made clear and was integrated into the overall course structure?

_____111. ...the course objectives were adequately outlined so that you knew where the course was going?

_____112. ...the course successfully integrated lecture materials and outside assignments?

_____113. Did the lectures impart intuition about the subject? (Use this scale: 1--never,...5--always)

_____114. ...the instructor gave clear and meaningful answers to student questions?

_____115. ...the instructor relates class topics to students' lives and experiences?

_____116. ...the instructor stresses the aesthetic and emotional value of the subject?

_____117. Does the instructor encourage class discussion?

_____118. ...graded materials (exams, papers, etc.) fairly and objectively measured the contents as empathasized in class?

_____119. ...the instructor gave clear and meaningful answers to student questions?

_____120. What is your overall rating of this course?

_____121. ...the instructor had adequate office hours during which he/she was available? (Mark NA if you did not try to see him)

_____122. Does the instructor encourage class discussion?

_____123. To what extent was there agreement between the proposed course objectives of the course and those which were actually taught?

_____124. ...the instructor is well informed about the progress of the class?

_____125. ...the instructor enjoys teaching?

_____126. ...the instructor realizes whether he is being understood or not?

_____127. To what extent, relative to other classes, do students get away with cheating on examinations?

_____128. ...the assignments were stimulating and interesting?

_____129. ...the instructor knows which parts of the course are most difficult and works on making them easier?

_____130. ...the instructor gave class presentations that were prepared and organized in a way that made the subject more understandable?

PLEASE INDICATE THE FIVE QUESTIONS YOU FEEL REFLECT MOST IMPORTANTLY (EXCLUDING EITHER POSITIVE OR NEGATIVE ASPECTS OF YOUR OVERALL LEARNING EXPERIENCE IN THIS COURSE BY WRITING IN THE NUMBER OF THOSE QUESTIONS IN THE BLANKS BELOW. (Do not list the same question more than once)

/_____ /_____ /_____ /_____ /_____

APPENDIX II
A LISTING OF THE TESTED ITEMS

TO WHAT EXTENT DO YOU FEEL THAT:

1. ...the purpose of class assignments was made clear and was integrated into the overall course structure?

2. ...the course objectives were adequately outlined so that you knew where the course was going?

3. ...graded materials (exams, papers, etc.) fairly and objectively measured the course contents as empathasized in class?

4. ...the instructor gave class presentations that were prepared and organized in a way that made the subject more understandable?

5. ...the instructor was enthusiastic about teaching the course?

6. ...the instructor was concerned that students understood the course materials?

7. ...the instructor appeared considerate of student feelings, problems, and point of view?

8. ...the instructor, given the constraints of the course, involved students in class discussion? (Use this scale: 1--far to little,...5--about right,... 9--far to much)

9. ...the instructor had adequate office hours during which he/she was available? (Mark NA if you did not try to see him/her)

10. ...the instructor was easy to approach and made you feel welcome in seeking out his/her help?

11. ...the instructor attempted to make course materials more relevant by discussing their implications and applications?

12. ...the instructor was free from speech or language habits which interfered with communications?

13. ...the instructor stimulated your intellectual curiosity in the subject?

14. What was the nature of learning empathacized in this course? (Use this scale: 1--specific facts,...9--conceptual ideas)

15. ...you learned something of value from the course?

16. Relative to other courses, how adequately do you feel that you have mastered the contents of this course?

17. Relative to other courses, how difficult was it to master the contents of this course? (Use this scale: 1--much easier,...5--about average,... 9--much harder)

18. What is your overall rating of this instructor?

19. What is your overall rating of this course?

20. To what extent did the course meet <u>your</u> objectives for taking the course?

21. To what extent was the instructor able to keep class discussion relevant and to the point?

22. To what extent, relative to other courses, do students get away with cheating on examinations?

23. To what extent was there agreement between the proposed course objectives of the course and those which were actually taught?

24. ...the course successfully integrated lecture materials and ouside assignments?

25. To what extent was the workload evenly distributed over the quarter?

26. To what ixtent does the instructor allow a few students to monopolize class discussion?

27. To what extent was class attendence important to the learning in this course?

28. ...the instructor was helpful in emphasis and summarization of main points during presentation?

29. ...the instructor gave clear and meaningful answers to student questions?

30. ...the instructor discussed points of view other than his/her own?

31. ...the instructor knows which parts of the course are most difficult and works on making them easier?

32. ...the instructor held your interest during lectures?

33. ...the instructor was unnecessarily harsh or embarassing to students? (Use this scale: 1--very much so,...9--not at all)

34. ...the instructor accurately gauged student background knowledge in the subject? (Use this scale: 1--underestimated,...5--about right,... 9--overestimated)

35. ...that adequate time was appropriately distributed over course topics?

36. To what extent has feedback from graded materials been valuable to your learning experience in this course?

37. How much did the lectures add to what you knew about the subject before taking the course? (Use this scale: 1--very little,...5--about average,... 9--very much)

38. Did your instructor pace his presentations to the understanding of the class? (Use this scale: 1--too slow,...5--about right,...9--too fast)

39. Did the lectures impart intuition about the subject? (Use this scale: 1--never,...9--always)

40. ...the examinations were of instructional value?

41. ...the assignments were interesting and stimulating?

42. ...the instructor stresses the aesthetic and emotional value of the subject?

43. ...the instructor realizes whether he is being understood or not?

44. ...the instructor is well informed about the progress of the class?

45. ...the instructor understands what a student is asking or telling him?

46. ...you have developed an increased appreciation for the subject?

47. ...the instructor contrasts the implications of various theories?

48. ...the instructor adequately discusses recent developments in the field?

49. ...the instructor adequately presents the origin of ideas and concepts?

50. ...the instructor's explanations are clear?

51. Relative to other courses, are the instructor's lectures easy to outline?

52. ...the instructor is careful and precise in answering questions?

53. Does the instructor encourage class discussion?

54. Does the instructor adequately invite students to share their knowledge and experiences?

55. ...the instructor clarifies thinking by idetifying reasons for questions?

56. Does the instructor invite criticism of his own ideas?

57. ...the instructor has a genuine interest in the students?

58. ...the instructor is friendly toward students?

59. ...the instructor relates to students as individuals?

60. ...the instructor recognizes and greets students out of class?

61. ...the instructor is a dynamic and energetic person?

62. ...the instructor has an interesting style of presentation?

63. ...the instructor enjoys teaching?

64. ...the instructor has a sense of humor?

65. ...the instructor relates class topics to students' lives and experiences?

APPENDIX III

RECOMMENDED INSTRUCTIONAL EVALUATION INSTRUMENT

TO WHAT EXTENT DO YOU FEEL THAT:

1. ...the instructor adequately presents the origin of ideas and concepts?
2. ...the instructor discussed points of view other than his/her own?
3. ...the instructor contrasts the implications of various theories?

These items measure the breadth of coverage and the extent to which diverse and alternative approaches are implemented during presentation.

4. ...the course objectives were adequately outlined so that you knew where the course was going?
5. ...the instructor was helpful in emphasis and summarization of main points during presentation?
6. ...the purpose of class assignments was made clear and was integrated into the overall course structure?

These questions measure student perceptions of the organization of the course, course materials, and class presentations.

7. ...the instructor enjoys teaching?
8. ...the instructor has an interesting style of presentation?
9. ...the instructor was enthusiastic about teaching the course?

This set of questions measures the instructor's flair and enthusiasm and how interesting he/she is.

10. Did your instructor pace his presentations to the understanding of the class? (Use this scale: 1--very little,...5--about right,...9--too fast)
11. Relative to other courses, how difficult was it to master the contents of this course? (Use this scale: 1--much easier,...5--about average,... 9--much harder)
12. ...the instructor accurately gauged student background knowledge in the subject? (Use this scale: 1--underestimated,...5--about right,... 9--overestimated)

These items will indicate how students feel about the relative difficulty of the class.

13. ...you learned something of value from this course?
14. ...you have developed an increased appreciation for the subject?
15. Relative to other courses, how adequately do you feel that you have mastered the contents of the course?

These questions measure student perceptions of how valuable the learning experience has been.

16. Does the instructor adequately invite students to share their knowledge and experiences?
17. Does the instructor encourage class discussion?

These items measure the extent to which students feel free to express themselves and to interact with the instructor and the rest of the class.

18. ...the instructor had adequate office hours during which he/she was available? (Mark NA if you did not try to see him/her)
19. ...the instructor was easy to approach and made you feel welcome in seeking out his/her help?

These questions measure student perceptions of how willing the instructor is to meet with them on a personal basis.

20. ...the instructor gave class presentations that were prepared and organized in a way that make the subject more understandable?

21. ...the instructor held your interest during lectures?

22. What is your overall rating of this instructor?

23. What is your overall rating of this class?

These items measure student perceptions of instructors on a general and non-specific good-bad continuum.